I claim:

1. A continuous-time active complex bandpass filter comprising:

a filter having a transfer function generated using only a plurality of transconductors and capacitors.

2. The continuous-time active complex bandpass filter of claim 1 wherein the transfer function includes an all-pole system.

3. The continuous-time active complex bandpass filter of claim 1 wherein the transfer function includes a system containing transmission zeros.

4. The continuous-time active complex bandpass filter of claim 1 wherein said filter is fabricated in monolithic technology selected from the group consisting of silicon CMOS, BiCMOS and bipolar processes.

5. The continuous-time active complex bandpass filter of claim 2 wherein said filter is fabricated as an on-chip active device.

6. The continuous-time active complex bandpass filter of claim 2 and further including:

a first-Order lowpass filter section having:

I input and 90-degree phase shifted Q input;

I output and 90-degree phase shifted Q output;

a pair of input transconductors for setting up the filter section gain;

a pair of $1/g_m$ resistors connected to said input transconductors and a pair of capacitors each having a value of C, connected to said pair of resistors to form a filter section pole at frequency g_m/C; and

a pair of cross-coupled transconductors g_{mA} connected to said input transcondutor and said pair of resistors to shift the position of the said pole to a complex location at $(g_m + jg_{mA})/C$, or $(g_m - jg_{mA})/C$.

7. The continuous-time active complex bandpass filter of claim 6 and further including:

a second-Order biquad filter including a cascaded pair of said first-Order lowpass filter sections wherein said lowpass filter sections create a pair of complex conjugate poles at $(g_m \pm jg_{mA})/C$.

8. The continuous-time active complex bandpass filter of claim 3 wherein said filter is fabricated as an on-chip active device.

9. The continuous-time active complex bandpass filter of claim 3 and further including:

a first-Order lowpass filter section having:

I input and 90-degree phase shifted Q input;

I output and 90-degree phase shifted Q output;

a pair of input unity-gain buffers;

a pair of input capacitors having a value C_1 connected to said buffers;

a pair of $1/g_m$ resistors connected to said input capacitors;

a pair of output capacitors having a value C connected to said pair of resistors to form a filter section pole at frequency $g_m/(C + C_1)$;

a first pair of cross-coupled transconductors g_{mA} connected to said output capacitors and said resistors to shift the position of the said pole to a complex location at $(g_m + jg_{mA})/(C + C_1)$, or $(g_m - jg_{mA})/(C + C_1)$; and

a second pair of cross-coupled transconductors g_{mB} connected to said input capacitors and said resistors to form an imaginary axis zero at jg_{mB}/C_1.

10. The continuous-time active complex bandpass filter of claim 9 and further including:

a second-Order biquad filter section including a cascaded pair of said first-Order lowpass filter sections wherein said lowpass filter sections create a pair of complex conjugate poles at $(g_m \pm jg_{mA})/(C_1 + C)$.

11. The continuous-time active complex bandpass filter of claim 10 having a lowpass prototype of an even-Order.

12. The continuous-time active complex bandpass filter of claim 11 and further including:

at least one second-order biquad filter section containing no zeros, a single, a double, or two different imaginary axis zeros.

13. The continuous-time active complex bandpass filter of claim 10 having a lowpass prototype of an odd-Order.

14. The continuous-time active complex bandpass filter of claim 13 and further including:

one first-order lowpass filter section containing no zeros, or a single imaginary axis zero; and

at least one second-order biquad filter section containing no zeros, a single, a double, or two different imaginary axis zeros.